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IMPROVEMENT OF DIESEL, SKIDDING TRACTORS; CUT IN METAL CONSUMPTION

STRESS FURTIER IMPROVEMENT OF TRACTORS' QUALITY -- Moscow, Avtomobil'maya 1 Traktornaya Promyshlennoct', Mar 52

The movement initiated by the Ural Automobile Plant imeni Stalin to increase the life of the ZIS-5 truck has evoked a broad response from tractor builders. A special conference of designers from tractor plants and scientific workers of NATI (State Union Scientific Research Tractor Institute) outlined measures to increase the life of DT-54 and KD-35 crawler tractors to 3,000 hours (instead of 2,000 hours) and of Universal wheel tractors to 2,000 hours (instead of 1,500 hours).

To achieve these goals, designers should utilize the properties of new materials and avoid the old method of increasing the strength and life of parts by increasing their weight. Experience has shown that the weight of parts, aggregates, and machines as a whole can be reduced, with a simultaneous increase in their strength and life, by using progressive design methods and technical

Severe operating conditions of tractors, especially in plowing (protracted operation at full load under field conditions), compel designers to pay special attention to mating parts, to all types of seals, and also to the system of filtering and cleaning air, fuel, and oil.

After long, concentrated research on seals, designers of the Khar'kov Tractor Plant have built a new self-tightening gland which lasts much longer owing to the replacement of leather by rubber.

However, questions connected with the best methods of sealing the fuel system, the water pump, and the side drive have not yet been solved. Existing air cleaners have design faults which contribute to increased wear of moving parts of the engine. Because of vibration of the air cleaner, breaking of the hermetic seal of the intake lines, unsatisfactory seals, and short life of the glass dust collector, dust enters the engine, evading the air cleaner.

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Among the corrective measures outlined are: increasing the wear resistance of parts by surface hardening, by surface covering, by replacing one material with another, and by developing stronger designs. These measures would take the form of chromeplating piston rings, hardening sleeves with high-frequency currents, strengthening crankshaft fillets by burnishing them with rollers, improving the quality of gears in splined joints, and improving the strength of housings.

One of the primary tasks of tractor plants and of NATI is to lengthen the life of caterpillar tracks. Along with the production of new caterpillar links, tractor builders should further improve all parts of the undercarriage to make them equally strong. Among the necessary measures are: improving gearing, strengthening of the drive sprockets and link cogs, general strengthening of the links, introduction of reliable seals, etc. Individual projects along these lines have already produced good results.

Thus, by reviewing the design of the caterpillar links of the KD-35 tractor and strongthening them, NATI and the Design Bureau of the Lipetsk Tractor Plant have already lengthened the life of the tracks. All work on caterpillar tracks must be completed in 1952.

Better maintenance is needed to lengthen the life of tractors. Use of quality lubricants, quality repair, and improvement of the qualifications of tractor drivers should not be the responsibility of the MTS slone. Complete and authoritative guides to the care and operation of tractors should be published.

TEST MODERNIZED SKIDDING TRACTOR -- Petrozavodsk, Leninskoye Znamya, 27 Apr 52

The Luga Timber Management has completed field tests of the improved skidding tractor built by the Leningrad Forestry Engineering Academy imeni S. M. Kirov in cooperation with the Lenles (Leningrad Timber) Trust

The tractor has a lengthened frame and a new gas generator engine which is more powerful than those on former skidding tractors. The tests showed that the weight of the load is distributed evenly over the whole tractor. The tractor's operating qualities have been improved, and it is 40 percent more productive than the series-produced skidding tractor.

AUTO WORKERS SAVE METAL -- Moscow, Vechernyaya Moskva, 8 Apr 52

In the course of 2 months, the Moscow Automobile Plant imeni Stalin has adopted measures that will save 2,354,000 rubles' worth of metal yearly.

Krylov, chief engineer of the plant, stated that if the plant worked according to 1948 metal-consumption norms, it would require an additional 30,000 tons of metal a year.

Moscow, Komsomol'skaya Pravda, 13 Apr 52

Workers of the Moscow Automobile Plant imeni Stalin have developed measures for saving metal in the production of 3,242 parts and 12 large units of vehicles put out by the plant. Since the competition for saving metal started 3 months ago, the consumption of ferrous bar stock has been reduced by 11.3 kilograms; of cast iron, 2.8 kilograms; and of nonferrous metals, 1.25 kilograms for each ZIS-150 truck produced.

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Moscow, Moskovskaya Pravda, 22 Apr 52

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At the Moscow Automobile plant imeni Stalin, workers have reduced the consumption of ferrous metals by 20.8 kilograms and of nonferrous metals by 6.95 kilograms for every bus produced.

FIANT SAVES METAL -- Moscow, Vechernyaya Moskva, 10 Apr 52

In 1951, the automatics shop of the Moscow Small Displacement Automobile Plant saved 36 tons of gauged steel and 5 tons of nonferrous metal, and the plant as a whole saved 200 tons of ferrous and nonferrous metal. In the same period, the shop saved 132,000 rubles by increasing the length of time between equipment repairs. At the beginning of 1952, 30 percent of the shop's equipment was rated excellent, 65 percent was rated good, and 5 percent was rated satisfactory. In the last 6 months of 1951, the shop saved more than 195,000 rubles by reducing the cost of every operation, and in Ja wary and February 1952, the plant saved about 75,000 rubles by this method.

At one time, rejects in the automatics shop were as high as 2.3 percent. Rejects were lowered from 0.9 percent in January 1951 to 0.1 percent in January 1952.

Uncompleted production was reduced from 25,000 rubles in the first quarter of 1951 to 1,600 rubles in the third and fourth quarters.

The shop saved 1,065,000 rubles above the plan in 1951. -- N. Voronkov, chief of the automatics shop, Moscow Small Displacement Automobile Plant.

TO SERIES-PRODUCE DUMP TRUCKS -- Tbilisi, Zarya Vostoka, 30 Mar 52

The Kutaisi Automobile Plant recently shipped a large consignment of trucks to enterprises of the Ministry of Petroleum Industry USSR.

The plant has finished preparations for series-producing KAZ-585 dump trucks, and will ship a large consignment of these trucks to the construction projects in the second quarter of 1952.

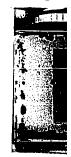
Tbilisi, Zarya Vostoka, 5 Apr 52

The main assembly shop of the Kutaisi Automobile Plant fulfilled its first quarter 1952 plan on 25 March.

Moscow, Pravda, 8 May 52

The Kutaisi Automobile Plant has produced the first KAZ-535-B dump truck. The improved truck has a mechanism which automatically opens and closes the back.

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BUILD SECOND AUTOMATIC LINE -- Moscow, Ogonek, 11 May 52

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The second automatic line for making truck pistons has been set up alongside the first automatic line, which was planned by the Experimental Scientific Research Institute for Metal-Cutting Machine Tools

Many shortcomings of the original line have been corrected, and the second line represents a step forward in automatic production.

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